

## ***DRAWINGS***

The Draftperson has objected to the drawings 1-3B due to the poor quality of the lines, numbers and letters. Applicants will submit formal drawing Figures 1-3B with lines, numbers and letters of the required quality in due course.

## ***35 U.S.C. 103***

Claims 1-9 have been rejected under 35 U.S.C. 103(a) over Klein (U. S. Patent 5,845,285) in view of Geer (U. S. Patent 5,930,778).

Applicants traverse the rejection of all of these claims on the basis that the Examiner has not established a prima facie case of obviousness. The art references on which he relies do not suggest a combination which reads on applicants claims. The Examiner has in the rejection of these claims assembled a piecemeal reconstruction of prior art patents and official notice which could only be done if done in light of applicants disclosure. Such a

reconstruction or combination is based upon an improper hindsight view of the art after having the benefit of applicants' disclosure.

Applicants' invention provides a system and method for preventing duplicate invoices from entering a payment application (SAP). Once an invoice is identified as a duplicate, it is rejected electronically and in real-time, automatically returned to the supplier prior to entering the payment application (SAP) for invoice processing. This enables automated error notifications (a.k.a. 824 transactions) to be sent out EDI. An invoice is identified as duplicate if it is of the same vendor invoice, the same purchase order number, and the same item number, AND has not been previously washed (that is, the sum of such invoice items is greater than zero.) Thus, applicants define a duplicate invoice as follows:

"Referring to Figure 2, the auditing step 82 includes, in step 88, sorting the inbound invoices against SAP production tables for same vendor and same vendor invoice number; in step 90, sorting hits from step 88 for same purchase order billed; in step 92, sorting hits from step 90 for same items billed on purchase order; and in step 94 sorting hits from step 92 to see

if any item identified has a net sum  $> 0$ . If an item has net sum  $\leq 0$ , it is not a duplicate and is allowed in steps 98 and 86 to be posted to the accounts payable data base. If an item has net sum  $> 0$ , it is a duplicate, and a transaction back to the vendor is created in steps 96 and 84 to cancel the duplicate invoice." (Specification, page 11, lines 4-15.)

First, with respect to Klein. Klein relates to a neural network based system for auditing data in a database for detecting duplicate data. Data already entered into the database is sampled and audited. It is important to note that Klein is auditing a database by selecting a sample of entries in the database and applying a neural network analysis to that sample to identify, inter alia, duplicate entries.

Applicants' invention relates to preprocessing debit invoices before they are entered into the accounts payable database. Klein teaches a system for auditing a database to identify possibly duplicate entries for future analysis.

Klein does not perform the same function or achieve the same result as applicants' claimed invention. The Examiner appears to recognize this point in stating that "Klein does

not explicitly teach preprocessing of invoices", and "Klein does not explicitly teach introduction to and rejection from a accounts payable data base." (See page 3 of the Office Action.) He then relies on Kline and Geer or Rail, and various assertions of "obvious to one of ordinary skill in the art..." not supported by reference to any specific teaching in the art, to reject applicants claims.

With respect to Geer. Geer relates to the efficient submission of checks and other financial instruments into the payment system for collection of funds. The Examiner asserts that Geer teaches "preprocessing of original invoices before introduction into a database". Applicants traverse this characterization. What Geer may properly be viewed as teaching is a data capture step, in which information from a check is obtained by electronic scanning and communicated electronically into a check clearing system by a payee. The whole objective of Geer is to electronically capture and transmit check data into the payment system so as, in his first example, to avoid the necessity of transferring the physical checks from the payee to the payor bank, or, in his second example, to allow check processing to continue through the payment system without waiting for the physical transfer of the checks. These checks are received by the payee from a customer together

with a remittance advice, that is a payment stub or invoice copy, so that the check amount can be properly credited to the payee customer's account. Geer is not a system for receiving invoices for payment, but rather a system for receiving checks in payment of invoices. There is no teaching in Geer of preprocessing invoices as claimed by applicants. Geer can only be fairly interpreted to teach that data from the checks are scanned and introduced into the payment system for subsequent checking and transaction reversal if, for example, it is determined that there are insufficient funds to cover the check or a stop order has been placed on the check.

Applicants invention relates to preprocessing of invoices to detect and reject duplicate invoices before they make it into the accounting system database. It is singularly important to realize that in Geer, a check or instrument submitted for collection is well into the financial system before action is taken for reversal.

"In the event of dishonor of a check by a payor bank, the process reverses as to the collection of the dishonored check, and this information may be transmitted electronically back through payment system 12 (or by more direct means of reversal) to depository bank 10 for unwinding the transaction and for debiting of the payee's account as to the dishonored check."  
(Geer, at Col. 9, lines 45-50.)

Thus, to the extent that Geer can be combined with Klein to

be applied to applicants' invention, Geer teaches away from applicants' invention. It is this necessity for unwinding of transactions that applicants' invention prevents in the context of invoice processing.

Referring now to applicants claims.

With respect to claim 1, Klein describes a method of analyzing data after the data is entered into a database. It does not address the preprocessing of data to eliminate duplicates prior to entering data into a database. In the rejection of claim 1, the Examiner references processing invoices received from vendor to identify duplicates invoices (abstract, column 5 lines 55-65 and column 6 lines 1 to 5). This reference does not teach the preprocessing of data prior to entering data into the database. These references when read in context are offered as examples of errors that are commonly found in databases and the conventional method of finding duplicate data. There is no teaching in Klein of providing a method of finding and eliminating the duplicates before they are entered into the database. The Examiner's suggests that Geer discloses preprocessing of invoices prior to introduction into a database (col 5, lines 58-60 & lines 43-45). That conclusion cannot be properly drawn. Geer speaks about a

process to eliminate the aggregate loading of all data twice, once into the payee's database and a second time into the depositories database. Geer's solution allows the data to be loaded once and used by both the payee and depository bank. It does not speak to the sorting of data for duplicates and elimination prior to loading. The Examiner also references Klein, indicating that Klein suggests the elimination of duplicate data and filtering database (col 26 lines 40-44 & col 27 lines 22-25). When these references are read in context, it is clear that Klein will provide the user a view of duplicate data, after the duplicates are entered into the database, and a prompt asking if the users wants to manually eliminate duplicate data, duplicate data exceeds the criteria for database accuracy is exceeded. Thus, it is not obvious that from Klein and Geer, alone or together, one would have developed the solution outlined in applicants' claim 1.

Applicants further assert that the Examiner has used impermissible hindsight, and applied applicants' own teachings against them in concluding that it would have been obvious to one of ordinary skill in the art to "introduce and reject data from an accounts payable database because this would allow filtering and sorting out to be implemented as soon as data is available." No reference or teaching on

the record supports an assertion that it is desirable to detect duplicate data before entry to an accounts payable database, that is as soon as it is available, or as soon as possible, and neither of the art references of Geer and Klein suggest such.

With respect to claim 2, Klein describes a method of analyzing data after the data is entered into a database. It does not address the preprocessing of data to eliminate duplicates prior to entering data into a database. In the rejection of claim 2, the Examiner references auditing invoice file for duplicate invoice item (abstract, column 5 lines 55-65 and column 6 lines 1 to 5); creating an electronic duplicate data transaction (col 26 lines 37-43) and posting to their system only data determined not to be duplicate (col 26, lines 32-36). This reference does not teach the preprocessing of data prior to entering data into the database. These references, when read in context, are offered as examples of errors that are commonly found in databases and the conventional method of finding duplicate data. There is no indication in Klein of providing a method of finding/eliminating the duplicates before they are entered into the database. It is not obvious that one would have drawn the conclusion from these references to grab EDI invoices, and check for and eliminate duplicates before



loading into an accounts payable database.

In taking official notice that it is obvious to grab data before input into a database, the Examiner is going specifically contrary to the teachings of Klein, which is sampling data already entered into the database for purpose of auditing, and which requires that duplicate or erroneous data be "corrected". In suggesting that inbound EDI invoice could be grabbed before inputting it into a database to allow detection of duplicate as soon as possible, the Examiner is improperly using applicants disclosure against their claim. The art does not suggest or even recognize the advantage of detecting duplicates as soon as possible, but rather much later, in the course of auditing data already entered. It is improper, as the Examiner has done, to take official notice of a concept which is at the heart of applicants invention: to grab an EDI invoice, and check for and eliminate duplicates before loading into an accounts payable database. The rejection of claim 2 is based upon an untenable series of official notices and conclusions of obviousness not supported by the art of record. Applicants traverse.

With respect to claim 3, which depends from claim 2, the reading of Klein given by the Examiner to suggest Klein

teaches the specific steps executed by applicants' claim 3 to identify duplicate invoices is a hindsight reconstruction of Klein based on applicants own disclosure. In rejecting claim 3 the Examiner references several sections of Klein, and infers that it would be obvious that Klein provides the solution that the IBM solution does. The Examiner references Kline at column 6 lines 8-10 which, when read in context is a statement of the primary goal of the conventional method. There is no teaching in Klein of providing a method of finding/eliminating the duplicates after grabbing the EDI transaction and before they are entered into the database. The reference to the techniques used in Klein (col 27 line 54-65 ; col 28 line 28 to 41 and lines 44-45) describe pattern matching techniques used within the Klein solution, which deals with finding duplicates after data is loaded into a database.

With respect to claim 4, and as previously discussed with respect to claim 3, the Examiner states that Klein does not explicitly teach grabbing an invoice from a vendor before it is input to an accounts payable database and creating a transaction to a vendor. Applicants agree. However, applicants assert that only impermissible hindsight reasoning and the use of applicants disclosure against the claim provide any basis for the Examiner to take official

notice of the grabbing step as is specifically defined by applicants. The only art applied in this case against any of the claims clearly requires just the opposite: eventual detection of erroneous or duplicate data entries require that the database be corrected or entries reversed. That is precisely the problem in the art (entry of duplicate invoices into an accounts payable database that must be later reversed) that applicants' invention as claimed prevents.

With respect to claim 5, the examiner's reference to Klein (col 6 line 8-10) when read in context, is a statement of the primary goal of the conventional method. There is no teaching in Klein of finding/eliminating duplicates after grabbing the EDI transaction and before they are entered into the database. Klein col 16 lines 1 to 5 is referring to the audit process after the data is entered into the database, not the preprocessing of the data before entering the data base. The examiner's opinion that it is old and well known in the art of data entry to grab data before input to a database for the purpose of examination of error, is not supported by anything in either Klein or Geer, and improperly relies on a bare assertion of obviousness at the heart of applicants' claimed invention. The examiner's opinion that Klein's neural network auditing approach is the

same as applicants invention is not correct. Applicants invention, as set forth in claim 4, finds duplicate invoices before being entered into the database. Klein provides the capability for the user to define criteria that creates a threshold to be used in an audit of an existing database. There is no indication in Klein that a zero sum approach is required or used. The Examiner's reference to Klein's (col 26 line 38-43 and col 26 lines 32-36) warning report and his deduction that it would have been obvious to one of ordinary skill, to communicate a duplicate invoice rejection message to the vendor, and to refrain from posting the invoice to the database is not supported. There is nothing in the art of record that supports that conclusion. When these references are read in context, it is obvious that the duplicate data is already in the database, and that the error report goes to a database auditor who has to determine if the data is to be corrected.

With respect to claim 5, the Examiner's reliance upon Geer for the preprocessing step is not supported by the reference itself. As previously discussed, erroneous entries to the check clearance process of Geer must be reversed. The preprocessing which Geer does, and upon which the Examiner relies, is merely a data entry step. Checks which will not clear are identified much later, and must be

reversed. The Examiner's reference to Klein (col 5 lines 55-65, col 6 lines 1 to 5) is taken out of context. This reference shows that Klein is discussing the common errors found in databases and conventional methods of finding duplicate data in databases. The Examiner's reference to Klein's (col 26 line 38-43 and col 26 lines 32-36) warning report and his deduction that it would have been obvious to one of ordinary skill, to communicate a duplicate invoice rejection message to the vendor, and to refrain from posting the invoice to the database is not supported by the references. When these references are read in context, it is obvious that the duplicate data is already in the database, and the report goes to the database auditor who has to determine if the data is to be corrected. The Examiner admits Klein does not teach the concept of preprocessing, but refers to Geer in conjunction with Klein to reach a conclusion that one of ordinary skill would have seen that preprocessing of invoices, rejection of invoices to vendors and the use of a zero sum approach are covered within Klein and Geer's teachings. Applicants traverse this conclusion. Geer does not teach the elimination of duplicate transactions in the context of entering data into a database. Geer's teaching are how to eliminate steps in the check payment process, not the elimination of duplicate transactions at the invoice or check level.

With respect to claim 6, Klein column 6 lines 8-10 is a statement of the primary goal of the conventional method. There is no teaching in Klein of providing a method of finding/eliminating the duplicates after grabbing the EDI transaction and before they are entered into the database. The reference to the techniques used in Klein (col 27 line 54-65; col 28 line 28 to 41 and lines 44-45) describe pattern matching techniques used within the Klein solution, which deals with finding duplicates after data is loaded into a database. The Examiner's reference to Klein's (col 26 line 38-43 and col 26 lines 32-36) warning report and his deduction that it would have been obvious to one of ordinary skill to communicate a duplicate invoice rejection message to the vendor, and to refrain from posting the invoice to the database is not supported. When these references in Kline are read in context, it is obvious that the duplicate data is already in the database, and the error report goes to a database auditor, who has to determine if the data is to be corrected. The Examiner admits Klein does not teach the concept of preprocessing, but references Geer in conjunction with Klein to reach a conclusion that one of ordinary skill would have seen that preprocessing of invoices, rejection of invoices to vendors and the use of a zero sum approach are covered within Klein and Geer's

teachings. Applicants traverse this conclusion. Geer does not teach the elimination of duplicate transactions in the context of entering data into a database. Geer's teaching are how to eliminate steps in the check payment process, not the elimination of duplicate transactions at the invoice or check level.

Further with respect to claim 6, the Examiner states that Klein does not explicitly teach grabbing, does not explicitly teach (the steps applicant claims for identifying duplicate invoices), does not explicitly teach communicating a duplicate invoice rejection message back to the vendor. Nowhere in the art of record is there any teaching of rejecting a computer detected duplicate invoice back to a vendor before it is entered into the accounts payable database. Applicants assert that the only basis on which these teachings can be implied from Klein involves impermissible hindsight reconstruction of Klein based upon applicants own disclosure and requires that the specific teachings of Klein be discounted.

With respect to claim 7, the Examiner references Klein col 6 line 8-10. When read in context, this is a statement of the primary goal of the conventional method. There is no teaching in Klein of providing a method of finding and

eliminating the duplicates after grabbing the EDI transaction and before they are entered into the database. Klein (col 27 line 54-65 ; col 28 line 28 to 41 and lines 44-45) describes pattern matching techniques used within the Klein solution, which deals with finding duplicates after data is loaded into a database. The Examiner's reference to Klein's (col 26 line 38-43 and col 26 lines 32-36) warning report and his deduction that it would have been obvious to one of ordinary skill, to communicate a duplicate invoice rejection message to the vendor, and to refrain from posting the invoice to the database is not supported. There is nothing in the art references of record that would allow that conclusion. When these references are read in context, it is obvious that the duplicate data is already in the database, and the error report goes to the database auditor who has to determine if the data is to be corrected. The Examiner admits Klein does not teach the concept of preprocessing, but references Geer in conjunction with Klein to reach a conclusion that one of ordinary skill would have seen that preprocessing of invoices, rejection of invoices to vendors and use of a zero sum approach covered within Klein and Geer's teachings. Applicants traverse. Geer does not teach the elimination of duplicate transactions in the context of entering data into a database. Geer's teaching are how to eliminate steps in the check payment process, not



he elimination of duplicate transactions at the invoice or check level.

Further, the Examiner states that Klein does not explicitly teach grabbing an invoice before input to an accounts payable database, nor identifying duplicate invoices (based upon the net sum analysis performed by a computer), nor communicating a duplicate invoice rejection back to the vendor. Nowhere in the art of record is there any teaching of rejecting a computer detected duplicate invoice back to a vendor before it is entered into the accounts payable database. Applicants assert that the only basis on which these teachings can be implied from Klein involves impermissible hindsight reconstruction of Klein based upon applicants own disclosure and requires that the specific teachings of Klein be discounted.

With respect to claim 8, the Examiner's reference to Klein (col 5 lines 55-65, col 6 lines 1 to 5) is taken out of context. A reading in context shows that Klein is discussing the common errors found in databases and conventional methods of finding duplicate data in databases. The Examiner's reference to Klein's (col 26 line 38-43 and col 26 lines 32-36) warning report and his deduction that it would have been obvious to one of ordinary skill, to

communicate a duplicate invoice rejection message to the vendor, and to refrain from posting the invoice to the database is not supported. There is nothing in the references cited that allows that conclusion. When these references are read in context, it is obvious that the duplicate data is already in the database, and the error report goes to the database auditor, who has to determine if the data is to be corrected. The Examiner admits Klein does not teach the concept of preprocessing, but references Geer in conjunction with Klein to reach a conclusion that one of ordinary skill would have seen that preprocessing of invoices and rejection of invoices to vendors using a zero sum approach are covered within Klein and Geer's teachings. Applicants traverse. Geer does not teach the elimination of duplicate transactions in the context of entering data into a database. Geer's teaching are how to eliminate steps in the check payment process, not the elimination of duplicate transactions at the invoice or check level.

Further with respect to claim 8, the Examiner states that Klein does not explicitly teach preprocessing of invoices. Applicants agree. However, the Examiner then states that Geer discloses such. Applicants traverse. As previously noted, Geer relates, at the point cited by the Examiner, to data entry into a check clearance system.



in conjunction with Klein to reach a conclusion that one of ordinary skill would have seen that preprocessing of invoices and rejection of invoices to vendors using a zero sum approach are covered within Klein and Geer's teachings. Applicants traverse. Geer does not teach the elimination of duplicate transactions in the context of entering data into a database. Geer's teaching are how to eliminate steps in the check payment process, not the elimination of duplicate transactions at the invoice or check level.

Further with respect to claim 9, the Examiner states that Klein does not explicitly teach grabbing an invoice before input to an accounts payable database, nor identifying duplicate invoices (based upon the net sum analysis performed by a computer), nor communicating a duplicate invoice rejection back to the vendor. Nowhere in the art of record is there any teaching of rejecting a computer detected duplicate invoice back to a vendor before it is entered into the accounts payable database. Applicants assert that the only basis on which these teachings can be implied from Klein involves impermissible hindsight reconstruction of Klein based upon applicants own disclosure and requires that the specific teachings of Klein be discounted. Applicants claim requires that these steps be performed by a computer, and Klein specifically teaches

that any identification of erroneous data in the database being sampled and audited be done by a human.

Claims 10 and 11 have been rejected under 35 U.S.C. 103(a) over Geer and further in view of Rail (U.S. Patent 5,680,611).

With respect to claim 10, the Examiner's reference to Geer (col 7 lines 4 to 25) speaks to the collection of checks and payment stubs from individuals who are paying a bill and the comparison of the check to the payment stub and storing the payment stub electronically. Geer does not teach about receipt of invoices for payment and an accounts payable database. Geer (col 9 lines 26-28 & lines 37-44) states that information is sorted, grouped and annotated by the depository bank, then sent to the payment system who then distributes the information to the payees bank, where the payees account is debited. Geer does not speak to sorting invoices into a credit/debit sequence in the order received, nor to posting logic for credit invoices. Geer's teaching are how to eliminate steps in the check payment process, not the elimination of duplicate transactions at the invoice or check level. The assertion that Rail teaches net sum logic for evaluating invoices, it in error. Rail deals with the creation of bills to be sent for payment, not

for invoices received for payment. Rail teaches a method that creates a "checksum" (specific characteristics of an invoice to be sent) and compares the checksum to checksum of previously created invoices to ensure a duplicate bill is not mailed. There is no teaching of how to prevent invoices to be paid from entering the database using a net zero logic.

With respect to claim 11, which depends from claim 10, the Examiner's suggestion that Rail teaches logic rejection of invoices from a vendor is not accurate. Geer's teaching are how to eliminate steps in the check payment process, not the elimination of duplicate transactions at the invoice or check level. Rail does not teach the rejection of invoices back to vendors.

Applicants request that the rejection of claims 1-11 be reconsidered and withdrawn, and the case passed to issue.

#### **SUMMARY AND CONCLUSION**


If, in the opinion of the Examiner, a telephone conversation with applicant(s) attorney could possibly

facilitate prosecution of the case, he may be reached at the number noted below.

Sincerely,

M. W. Beach, et al

By

  
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